STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: Summit *Agreement #:* 76495

2. Name of applicant: Washington Department of Natural Resources

3. Address and phone number of applicant and contact person:

   Bob McKellar
   Department of Natural Resources
   P.O. Box 190
   Colville, WA 99114-0190 (509) 684-7474

4. Date checklist prepared: June 12, 2004

5. Agency requesting checklist: Washington Department of Natural Resources

6. Proposed timing or schedule (including phasing, if applicable):

   a. *Auction Date:* November 16, 2004
   b. *Planned contract end date (but may be extended):* June 30, 2007
   c. *Phasing:*

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Some broadcast burning may take place to aid in the establishment of planted seedlings. Normal ground disturbance will occur as a result of yarding operations. Units 3, 4, and 5 will be planted on the completion of this project. Grass seeding will also take place upon completion of the timber sale to minimize soil erosion.

   Timber Sale

   a. *Site preparation:*

   Normal ground disturbance will occur with yarding operations. Some broadcast burning may occur, if needed, and burning of slash piles.

b. Regeneration Method:

Units 3, 4, and 5 are to be planted with approximately 300 trees per acre of western larch. Natural regeneration also is expected in all units.

c. Vegetation Management:

Ditch lines, headwalls, catch basins, and skid trails will be seeded with grass to minimize surface erosion, promote soil rehabilitation and reduce the spread of noxious weeds. The district will continue its aggressive roadside noxious weeds program, combined with road closures, to minimize noxious weed introduction and spread.

d. Thinning:

No thinning will occur as part of this proposal.

Roads: See A.11

Rock Pits and/or Sale: See A.11

Other:

8. *List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.*

☐ *303 (d) – listed water body in WAU:* ☐ *temp* ☐ *sediment* ☐ *completed TMDL (total maximum daily load):*
☐ *Landscape plan:*
☐ *Watershed analysis:*
☐ *Interdisciplinary team (ID Team) report:*
☒ *Road design plan: Dated 7/07/2004*
☐ *Wildlife report:*
☐ *Geotechnical report:*
☒ *Other specialist report(s): Water Type Inspection Form, submitted DNR Bodie Road Maintenance and Abandonment Plan.*
☐ *Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☐ *Rock pit plan:*
☒ *Other: GIS generated WAU maps showing soil type, mass wasting potential, erosion potential, soil stability, and hydrologic maturity of the Wauconda Summit WAU, Department of Natural Resources (DNR) TRAX, Washington Department of Fish and Wildlife (WDFW) Heritage database, DNR Forest Resource Plan, DNR Forest Resource Plan, July 1992, Environmental Impact Statement, July 1992, DNR Smoke Management Plan, April 1993, and the State Soil Survey.*

9. *Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.*

No, there are no pending proposals directly affecting the property covered by this proposal. There is a current Surface Mining Reclamation Permit and a mining lease for a small surface mine to the south of Unit 4 of this proposal on DNR managed land. While the permits are current, no activity has occurred at the site for at least 10 years, and to date there is no further activity planned for the future.

10. List any government approvals or permits that will be needed for your proposal, if known.

☒ *HPA* ☒ *Burning permit* ☐ *Shoreline permit* ☐ *Incidental take permit* ☒ *FPA #* _____ ☐ *Other:*

11. *Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)*

a. Complete proposal description:

This proposal is located within the Republic WAU, approximately 15 miles west of Republic, Washington. The proposal area includes 255 gross acres, of which there are 248 net acres proposed for harvest of approximately 2.3 MMbf of conifer timber within five separate harvest units. Harvest systems will be ground based operations using rubber-tired or track mounted machinery.

The transportation system used throughout this proposal will be upgraded to meet and/or exceed current Forest and Fish Standards. There will be approximately 8,218 feet of new road construction and 14,635 feet of road reconstruction as part of this proposal. Culverts, rolling drain dips, water bars and ditchlines will be utilized to ensure proper drainage. Rock will be placed on road surfaces crossing typed waters to minimize sediment delivery, and grass seed will be used on all road running surfaces, cut/fill slopes, ditchlines and catchbasins at the completion of the project to further decrease soil erosion and potential sediment delivery. A temporary bridge will be installed on the E373119A crossing of the West Fork of Granite Creek. This bridge will be removed at the completion of the project.

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

A mixture of 80-120 year old Douglas fir and western larch with scattered pockets of Engelmann spruce, lodgepole pine, and sub alpine fir dominates all units within this proposal. Douglas fir infected with dwarf mistletoe, Douglas fir Beetle, and armallaria spp root rot dominates the overstory of all units. The western larch in the overstory is also infected with dwarf mistletoe. Excluding large diameter remnants, average stand diameters range from 14-16 inches. Within Units 3, 4, and 5, both the overstory and the understory of these units are blanketed with dwarf mistletoe infection and root rot activity within the Douglas fir component. These three units will utilize a seed tree prescription leaving approximately 8-12 of the largest and healthiest trees per acre, giving preference to western larch and then Douglas fir.

Units 1, 2, and a portion of Unit 3 do not show as severe of symptoms in dwarf mistletoe and/or root rot infection as the other units. These units are visible along Highway 20. As a result, Units 1 and 2, and a portion of Unit 3 will utilize an uneven aged harvest prescription leaving approximately 21-25 trees per acre favoring the best available species.

The overall harvest objectives will be to generate revenue for the common school trust, to reducing dwarf mistletoe and root rot host trees, to increase the western larch component of the stands, to maintain the integrity of the forested corridor, to retain wildlife and green recruitment trees for the purpose of wildlife cover and habitat, to increase the over all health and vigor of the stands for future production, and to provide a diversified age class across the ownership to reduce the risk of catastrophic fire.

c. *Road activity summary. See also forest practice application (FPA) for maps and more details.*

All new road construction mentioned below will be closed to the public at the completion of this project due to private gates/road access, and the removal of the temporary bridge mentioned above. In addition to the work described above, best management practices outlined by the DNR in the Bodie Road Maintenance and Abandonment Plan will be utilized.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		8,218	7.5	0
Reconstruction		14,635		0
Abandonment		0	0	0
Bridge Install/Replace	1/1 (temporary)			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	11			

12. *Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. (See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. *Legal description:*

Parts of Section 7, Township 37 North, Range 31 East, W.M.
Parts of Section 18, Township 37 North, Range 31East, W.M.
Parts of Section 19, Township 37 North, Range 31East, W.M.

b. *Distance and direction from nearest town (include road names):*

The sale is located approximately 15 miles west of Republic, Washington via Highway 20.

c. *Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")*

The proposal is located within the Republic WAU of the Republic sub-basin.

13. *Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)*

This proposal is located within the Republic WAU. This WAU covers approximately 50,828 acres. The West Fork of Granite Creek is within the proposal vicinity. No significant increases to peak flows or other resource impacts associated with the Summit proposal in combination with past, present, or reasonably foreseeable activities in the Republic WAU are anticipated.

Approximately 41% of the Republic WAU falls within the boundaries of the Okanogan and Colville National Forests. About 50% is under private ownership, and the remaining 9% is managed by the DNR. Approximately 90% of the WAU is considered forested, based on photo interpretation of recent (2000) photos and field recon observations. Other DNR harvests within the WAU were in the ROS zone, most of which were uneven age management, and were harvested at least 15 years ago. There is approximately 100 acres of private, even age harvest immediately adjacent to Unit 4 of this proposal, all of which is in the snow dominant zone. These adjacent units were harvested within the last ten years.

Data collected from the state soil survey indicates that approximately 47% of the proposal area has low to medium soil erosion potential and insignificant to low mass wasting potential. There was no soil data available for approximately 13% of the proposal area, nearly all of which is described as a rock outcrop complex (see soils table below in B.1.c). Approximately half of Unit 5 of the proposal is within this soil type, however, rock cliff/outcroppings to the east were excluded from the unit. No operations will take place on or above these areas. Additionally, all of this soil type within the proposal area lies within the snow dominant zone. When considering the WAU as a whole, 22% of the WAU has a high soil erosion potential, and 71% was found to have a low to medium soil erosion potential. About 60% of the WAU was identified to have stable slopes, while 25% of the WAU is unstable, and the remaining 2% identified as being very unstable. Approximately 2% of the WAU has a high mass wasting potential, 24% was found to have medium mass wasting potential, and the remaining 62% was considered having an insignificant to low mass wasting potential. See table in B.1.s for breakdown of soils within harvest units.

According to the DNR GIS database, within the last seven years there has been 500 Forest Practice application approved acres for even age harvest and 71 acres approved for uneven age harvest on DNR land within the WAU. These harvests constitute about 1% of the WAU. On non-DNR managed lands (private ownership), there has been 1,402 Forest Practice application approved acres of even age harvest, and 4,174 acres of uneven age harvest approved within the WAU. Based on photo interpretation of recent photos (2000) there has been approximately 1,700 acres of even age harvest and 500 acres of uneven age harvest within the WAU on USFS land within the last ten years.

Current and reasonably foreseeable proposed activities on DNR managed lands have been/will be planned with water quality/flow in mind. Care has been taken to minimize the potential for adverse impacts. Grazing and dispersed recreation use is anticipated to continue on DNR parcels throughout the WAU. Actual forested lands currently being managed by the DNR for timber production is a small percentage of land within the WAU and should have minimal cumulative impacts across the entire WAU. See Sections b.1.h, B.3.a.2, B.3.a.3, B.3.a.5, B.3.a.7, B.3.a.9, B.3.c.1, and B.3.d.

Between 8-25 trees per acre will be left in each proposed harvest unit as legacy and wildlife reserve trees. Leave trees include green trees and dead snags. Leave trees will be scattered throughout the units. The largest available trees will be left, giving preference to mistletoe free western larch and root rot free Douglas fir. Small openings will be scattered throughout the units due to root rot pockets and areas of high mistletoe infestations. No increases in peak flow or other resource impacts within the WAU are anticipated as a result of this proposal in combination with all other timber, range, recreation or agricultural management across all ownerships in the ROS zone within the Republic WAU.

To assure that this proposal will not contribute to an increased chance of cumulative environmental impact, many protection measures have been included in the proposal. Roads are designed according to road specifications outlined in the road plan and dry weather construction season to maximize resource protection. Cross drain culverts will be placed in draws and typed waters to maintain hydrologic connectivity. In addition, the proposal will require that a temporary bridge be installed for the purpose of log haul along the E373119A road, and will be removed at the completion of this project to maintain the natural meander of the stream. All roads within the proposal area will be closed to traffic at the conclusion of this project due to private gates/road access. Drivable dips, water bars, ditches, and rock will be used to avoid resource or capital improvement damage due to soil erosion. Best management practices outlined by the DNR in the Bodie Road Maintenance and Abandonment Plan No. R2302662 will be utilized. Water bars and placement of slash on skid trails are expected to minimize soil erosion within harvest units. All roads and skid trails will be grass seeded at the conclusion of this project. Typed waters have been protected with no harvest buffers in order to minimize the opportunity for sediment delivery to streams.

Nearly all of the proposal area is located within the snow dominant range within the WAU. There have been no known events of slope instability or mass wasting within the vicinity of the proposal area and adjacent harvest units. No increases to peak flows or other resource impacts within the WAU are anticipated as a result of this proposal in combination with all other timber, range, recreation or agricultural management across all ownerships within the Republic WAU.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. *General description of the site (check one):*

☐*Flat,* ☐*Rolling,* ☐*Hilly,* ☐*Steep Slopes,* ☒*Mountainous,* ☐*Other:*

1) *General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).*

The general terrain of the WAU includes flat benches, bluffs, mountainous steep slopes, and valleys with slopes averaging two to 70 percent. Precipitation within the WAU averages from 10 to 30 inches a year. Elevations range from 1,500 to 6,000 feet. Major timber types include Douglas fir, Douglas fir/western larch, Douglas fir/ponderosa pine (lower elevations), sub alpine fir (higher elevations), lodgepole pine, and scattered pockets of Engelmann spruce. Approximately 90% of the WAU is coded as forested land and 10% is coded as non-forested. The classification codes are obtained from Landsat/TM data imagery data collected in 1988.

2) *Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).*

The elevation of the proposal is between 4,000 and 5,000 feet. The proposal mainly consists of Douglas fir and/or western larch dominated stands with scattered pockets of spruce, and sub alpine fir.

b. *What is the steepest slope on the site (approximate percent slope)?*

Steepest slopes are approximately 60% on about 3% of the proposal area.

c. *What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture	% Slope	Acres	Mass Wasting Potential	Erosion Potential
0676	F. Sandy Loam	0-25	90	Insignificant	Medium
4783	Silt Loam	45-70	47	Medium	High
9409	Stony Loam	45-70	46	Medium	High
9416	Xerochrepts-Rock Outcrop Complex	45-70	30	No Data	No Data
5729	Gravelly F. Sandy Loam	25-55	25	Low	Medium
4725	Sandy Loam	25-45	8	Low	Medium
5281	Silt Loam	0-25	5	Insignificant	Medium
4779	Loam	45-70	1	Medium	High
4780	Silt Loam	0-25	1	Insignificant	Medium
4784	Molson-Rock Outcrop-Complex	15-50	1	No Data	No Data
6771	No Data	50-90	1	No data	No Data

d. *Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.*

1) *Surface indications:*

There were no observable surface indications of unstable soils within the immediate vicinity of the proposal.

2) *Is there evidence of natural slope failures in the sub-basin(s)?*
☒*No* ☐*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

There are no known natural slope failures within the sub-basin.

3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
Associated management activity:

Small local events can be found along cut banks of main county roads and other roads within the WAU. These consist primarily of sloughing of material into ditches and occasionally onto road surfaces.

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*
☐*No* ☒*Yes, describe similarities between the conditions and activities on these sites:*

Sites and soil types located within this proposal are similar to other small local events within the WAU. Roads have been located on as gentle ground as possible. Preventative and corrective measures will be taken to avoid any resource or capital improvement damage and similar failures due to past activities.

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*

All harvest units have been designed with slope stability protection measures in mind. All typed waters have been buffered to meet and/or exceed distances required by Forest Practice rules. Legacy and reserve trees have been scattered throughout all units to aid in soil/stability. Additionally, three of the five units will be planted within two years of the completion of this project in order to accelerate the revegetation process within the units and to enhance soil strength.

Some new road construction will be required as part of this proposal. All new roads have been located on as gentle ground as possible in order to reduce the amount of excavation, road cuts, and sidecast required. These will be maintained to allow for proper drainage as prescribed in the Forest Practice rules. Proper road maintenance, coordinated skidding patterns, effective contract administration, and normal road maintenance practices are expected to minimize most erosion potential. Water bars and/or drivable dips, ditching and cross drains, outsloping, monitoring, and revegetation will be utilized. All proposed measures will meet or exceed Forest Practice regulations. Road surfaces will be outsloped/insloped/crowned. On crowned or insloped portions of roads, ditchlines and crossdrains will be installed. Crossdrain structures will conduct water out onto natural vegetation on the forest floor. Energy dissipating structures will be placed at the outfall of crossdrains where necessary to prevent erosion. Headwalls of culvert inlets will be rocked. Fill around culverts at live stream crossings will be armored with rock on the inlet and outfall sides. Non-erodible material for road surfacing will be applied within 50 feet of Type 4 stream crossings and 100 feet of Type 3 stream crossings. Ditch lines and cut and fill slopes will be revegetated. Best management practices outlined by the DNR in the Bodie Road Maintenance and Abandonment Plan will be utilized. On slopes greater than 25%, main skid trails will be water barred or have slash scattered on them as determined by the contract administrator. Within 100 feet of typed waters, skid trails will have slash scattered on them and/or be revegetated. Haul will not occur during spring breakup (April 1 to June 1). All proposed new road construction will be closed to traffic at the conclusion of this project due to private gates/access.

e. *Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.*

Approx. acreage new roads: 7.5 Approx. acreage new landings: 5 Fill source: None

f. *Could erosion occur as a result of clearing, construction, or use? If so, generally describe.*

There is potential for some erosion to occur as a result of road construction and harvest activities associated with this proposal. This sale was designed to conform to or exceed Forest Practice regulations. Best management practices outlined by the DNR in the Bodie Road Maintenance and Abandonment Plan will be utilized. Management techniques have been identified where appropriate to minimize or eliminate the risk of erosion. No harvest will occur within identified riparian management zones. Please refer to B.1.d.5 for management activities designed to minimize erosion.

g. *About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? Approximate percent of proposal in permanent road running surface (includes gravel roads):*

No impervious surfaces will be used as a result of this proposal. Rock will be used during new road construction and reconstruction on either side of typed stream crossings (less than 1% of the sale area). Approximately 3% of the proposal area is covered with existing roads (native surface materials), and will be grass seeded upon completion of the project.

h. *Propose measures to reduce or control erosion, or other impacts to the earth, if any:*
(Include protection measures for minimizing compaction or rutting.)

See B.1.d.5

2. Air

a. *What types of emissions to the air would result from the proposal (i.e., dust from truck traffic, rock mining, crushing or hauling, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.*

This proposed timber harvest will involve vehicle emissions from logging, yarding, and hauling equipment; dust from road construction and logging activities; and dust from log hauling activities. Such emissions should result in no significant impact to air quality. If broadcast burning/slash burning occurs, it will adhere to the state's Smoke Management Program.

b. *Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.*

There are no off-site sources of emissions or odor that will affect the proposal.

c. *Proposed measures to reduce or control emissions or other impacts to air, if any:*

Dust abatement will be performed as needed from July 1 to November 1 to reduce dust along all DNR roads as determined by the contract administrator.

3. Water

a. *Surface:*

1) *Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. (See timber sale map and forest practice base maps.)*

Yes, see Forest Practice Activity Map for stream locations.

There is one Type 3 stream located within the vicinity of the proposal (West Fork Granite Creek).

There are three Type 4 stream segments within the vicinity of proposed harvest Units 1, 3, 4, and 5.

a) Downstream water bodies:

West Fork Granite Creek.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (How many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Stream	4	3	50
Stream	3	1	100

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

A no harvest buffer of at least 50 feet from harvest unit boundaries protects type 4 waters. A Type 3 stream is adjacent to Units 1, 2, and 3, and is also protected by a no harvest buffer of at least 100 feet from harvest unit boundaries in all locations.

A temporary bridge will be installed over the West Fork Granite Creek in order to maintain fish passage through the time of the proposal. Many measures will be taken to reduce the amount of sediment runoff and soil erosion due to roads. Culverts have been added in portions of new construction and reconstruction to help facilitate drainage in natural draws. Riprap will be used to aid in stream bank stability where applicable, and road surfaces will be rocked across streams as part of this proposal. Rolling drain dips, water bars, ditchlines, filter fabric, crossdrains and operating season will aid in minimizing sediment runoff and subsequent delivery into streams. Best management practices outlined by the DNR in the Bodie Road Maintenance and Abandonment Plan will be utilized. All roads and skid trails will be grass seeded upon completion of this project to further reduce soil erosion as a result of this project.

2) *Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.*
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map.)*
Description (include culverts):

Type 4 stream segment crossing under E373107C: As part of the reconstruction of this portion of the road, a culvert will be placed in the Type 4 water as per Forest Practice rules. Rock will also be placed on the road at least 50 feet either side of the crossing. The stream has a 50-foot no harvest boundary on either side. Right of way wood may be removed at this installation site that is within the 50 foot no harvest boundary.

Type 4 stream segment crossing under E373119B: As part of the new construction of this portion of the road, a culvert will be placed in the Type 4 water as per Forest Practice rules. The culvert will be a 36" CMP to accommodate the flow and meander of the stream. Rock will be placed on the road at least 50 feet either side of the crossing. Unit 3 boundary is at least 500 feet from this stream.

Type 4 stream segment near Units 1 and 5: The perennial initiation point (PIP) of this stream is below the E373107A road and the unit boundaries are at least 50 to 100 feet from the PIP and the stream.

Type 3 stream crossing under E373119A: As part of the reconstruction of this portion of the road, a temporary bridge will be installed across the Type 3 stream. Rock will be placed on the road 100 feet on either side of the stream crossing. The bridge will be removed at the completion of this project.

3) *Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.*

Fill and dredge material will be the absolute minimum needed for installation and possible subsequent removal of culverts. Clean adjacent fill material will be used and managed prudently.

4) *Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (Include diversions for fish-passage culvert installation.)*
☒*No* ☐*Yes, description:*

Surface water withdrawals or diversions will not be needed as part of this proposal.

5) *Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.*
☒*No* ☐*Yes, describe location:*

The proposal does not lie within a 100-year floodplain.

6) *Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.*
☒*No* ☐*Yes, type and volume:*

No waste will be discharged into surface waters.

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

Yes, areas within the WAU may be susceptible to erosion. Surface erosion is a natural occurring process and will continue with or without management. The potential for eroded material to enter surface water is expected to be minimal. Mitigation measures designed to limit soil erosion can be found in B.1.5.d.

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☒*No* ☐*Yes, describe changes and possible causes:*

No, however, there is a history of periodic high water events that flush streams, which appears to be part of the natural hydrologic process. There are also isolated occurrences of livestock use, which may cause some stream bank erosion/instability in individual areas.

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☒*No* ☐*Yes, explain:*

There is little adverse impact to stream flow or water quality anticipated as a result of activities associated with this proposal. Sale unit design, skidding patterns, operating seasons, road mitigation measures and prescriptions are expected to minimize potential for adverse impacts.

10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?
Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒*No* ☐*Yes, describe:*

Road miles per square mile in the Republic WAU are 2.80 miles per section. DNR ownership in the WAU contains approximately two miles of road per section.

11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, ***STOP HERE*** *and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☐*No* ☒*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):

A portion of Units 2 and 3 of the proposal are within the ROS zone. The rest of the proposal is within the snow dominant zone. Approximately 68 % of the WAU is in the ROS zone.

12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?

After examining recent (2000) orthophotos, it was determined that, across all ownerships, approximately 80% of the land within the ROS zone is hydrologically mature.

13) Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?
☒*No* ☐*Yes, describe observations:*

No, however, there is evidence of past high water events within the Republic WAU. These events appear to have occurred as natural events in the history and evolution of the WAU.

14) Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.

Mitigating factors for this proposal such as harvest design, harvest prescription, road maintenance/reconstruction practices, and operating season restrictions are not expected to contribute to increased peak flows in areas associated with the proposal. Recent harvests within the immediate vicinity of the proposal occurred 15-20 years ago are currently fully stocked. DNR ownership within the WAU is approximately 9% of the WAU. Not all of these lands are managed for timber production, thus the proposed activities are expected to be minimal for the entire WAU.

Federal ownership is approximately 41% of the WAU. Most of that ownership is expected to be maintained in a mature condition. As determined form recent 2000 photos, most even age activity on federal lands occurred 15-20 years ago and are currently fully stocked. These previous harvests should not affect peak flows due to rain on snow events.

It is anticipated that management on private land will continue. About 50% of the WAU is under private ownership. Much of this land is non-forested and would not affect hydrologic maturity. Current and expired Forest Practice Applications from the previous seven years represent a small portion of total WAU acreage (12%) the majority of these were uneven aged management.

Current and reasonably foreseeable activities have been planned with water quality/flow in mind, and care has been taken with this proposal to minimize the potential for adverse impacts. See sections B.1.h, B.3.a.2, 3, 5, 7, 9, B.3.c..1, B.3.d.

15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*
☒*No* ☐*Yes, possible impacts:*

No changes in surface water amounts or movements are anticipated as a result of this proposal.

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*

See B.3.a.14 and B.3.a.1.c.

b. Ground *Water*:

1) *Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.*

No ground water will be withdrawn as part of this project. Ground water should not be significantly changed by this project. Reduction in water quality should not occur as a result of activities associated with this proposal. Some surface water discharge (around culverts) may percolate to ground water.

2) *Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.*

No waste materials will be discharged into ground water.

3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☒*No* ☐*Yes, describe:*

a) Note protection measures, if any.

See B.3.a.14 for measures that will mitigate any potential impacts to ground water quality or quantity.

c. *Water Runoff (including storm water):*

1) *Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.*

Snowmelt and rain are the main sources of water runoff. Runoff that is intercepted by road surfaces and ditches will be diverted onto the undisturbed forest floor where possible. Culverts have been located to minimize the amount of runoff directly entering existing stream channels.

2) *Could waste materials enter ground or surface waters? If so, generally describe.*

a) Note protection measures, if any.

Minor amounts of logging slash may enter some surface waters. Slash will be removed by hand if this occurs.

d. *Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:*

See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.

4. Plants

a. Check or circle types of vegetation found on the site:

☒*deciduous tree:* ☒*alder,* ☒*maple,* ☒*aspen,* ☐*cottonwood,* ☒*western larch,* ☐*birch,* ☐*other:*
☒*evergreen tree:* ☒*Douglas fir,* ☐*grand fir,* ☐*Pacific silver fir,* ☐*ponderosa pine,* ☒*lodgepole pine,* ☐*western hemlock,* ☐*mountain hemlock,* ☒*Englemann spruce,* ☐*Sitka spruce,* ☐*red cedar,* ☐*yellow cedar,* ☐*other:*
☒*shrubs:* ☐*huckleberry,* ☐*salmonberry,* ☐*salal,* ☒*other: ninebark, serviceberry*
☒*grass*
☐*pasture*
☐*crop or grain*
☐*wet soil plants:* ☐*cattail,* ☐*buttercup,* ☐*bullrush,* ☐*skunk cabbage,* ☐*devil's club,* ☐*other:*
☐*water plants:* ☐*water lily,* ☐*eelgrass,* ☐*milfoil,* ☐*other:*
☐*other types of vegetation:*
☐*plant communities of concern:*

b. *What kind and amount of vegetation will be removed or altered? (See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")

Unit 1: Bordered to the east by Unit 5. Bordered by 80+-year-old stands of predominantly Douglas fir to the south. Bordered to the north and west by scattered Douglas fir and Engelmann spruce ranging from 5 to 100+ years old.

Unit 2: Surrounded by scattered timber and natural openings. Scattered timber is predominantly Douglas fir, western larch, and Engelmann spruce, ranging from five to 100+ years old.

Unit 3: Bordered to the east and west by stands of predominantly Douglas fir and western larch approximately 80+ years old. The unit is bordered to the north and south by scattered timber and natural openings. Scattered timber is predominantly Douglas fir and western larch five to 100+ years old.

Unit 4: Bordered to the west by an uneven age harvest unit of approximately 80-100 acres, harvested 15+ years ago. The remaining timber is predominantly Douglas fir and western larch. The unit is bordered to the north by scattered timber, predominantly Douglas fir 5 to 100+ years old. Unit 4 is bordered to the east and south by 3 even age harvest units (approx 15-30 ac each), and stands of predominantly Douglas fir and western larch 80+ years old.

Unit 5: Bordered to the west by Unit 1. Bordered to the east and south by stands of predominantly Douglas fir and western larch 80+ years old. Unit 4 is bordered to the north by scattered timber, predominantly Douglas fir and western larch five to 100+ years old.

2) Retention tree plan:

Within Units 1 and 2, between 21 and 25 trees per acre will remain following completion of harvest. Within Units 4 and 5, approximately eight to 12 trees per acre will be left. There will be approximately eight to 25 trees per acre in Unit 3 depending on the levels of mistletoe infection and root disease. Leave trees include green trees and dead snags. The largest available trees will be left, giving preference to mistletoe free western larch and Douglas fir. Small openings will be scattered throughout the units due to heavier concentrations of mistletoe and root rot.

c. *List threatened or endangered plant species known to be on or near the site.*

No threatened or endangered plant species are known to be on or near the site.

d. *Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:*

Grass seeding (native seed) along roads on disturbed soils will help prohibit the spread of noxious weeds and is expected to minimize erosion.

5. Animal

a. Circle or check any birds animals or unique habitats which have been observed on or near the site or are known to be on or near the site:

birds: ☒*hawk,* ☐*heron,* ☐*eagle,* ☒*songbirds,* ☐*pigeon,* ☒*other: grouse*
mammals: ☒*deer,* ☒*bear,* ☐*elk,* ☐*beaver,* ☒*other: cougar*
fish: ☐*bass,* ☐*salmon,* ☐*trout,* ☐*herring,* ☐*shellfish,* ☐*other:*
unique habitats: ☐*talus slopes,* ☐*caves,* ☒*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

b. *List any threatened or endangered species known to be on or near the site (include federal- and state-listed species).*

None

c. *Is the site part of a migration route? If so, explain.*
☐*Pacific flyway* ☒*Other migration route:* *Explain if any boxes checked:*

Mule deer and whitetail deer may use the general area annually during migration. Due to the proposed activities, there may be increased potential for the site to be used more often as part of the overall migration route. The regeneration of grasses, forbs, low shrubs, bushes, etc., may create more habitat opportunities for deer and other herbivores.

d. *Proposed measures to preserve or enhance wildlife, if any:*

This proposal is expected to have a positive effect on wildlife species that favor early seral forest habitats. Approximately 8-25 trees per acre will be left in each proposed harvest unit as legacy and wildlife reserve trees. Leave trees include green trees and dead snags and will be scattered throughout the units. The largest available trees will be left, and small openings will be scattered throughout the units due to heavier concentrations of mistletoe. Riparian management zone buffers have been placed on all typed waters where necessary as required by Washington State Forest Practice rules.

6. Energy and Natural Resources

a. *What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.*

Most logging and log hauling equipment will require the use of diesel fuel.

b. *Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.*

No, the project will not affect the potential use of solar energy by adjacent properties.

c. *What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:*

No, energy conservation features are not included in the plans of this proposal.

7. Environmental Health

a. *Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste,that could occur as a result of this proposal? If so, describe.*

1) Describe special emergency services that might be required.

Minor spillage of fuel and oil lubricants is always possible. The risk of forest fire is always present and may be increased for a year or so due to logging slash prior to green up.

2) Proposed measures to reduce or control environmental health hazards, if any:

There are no current foreseeable environmental health hazards as a result of this project. Washington Department of Ecology will be notified if any significant spills occur and appropriate action will be taken. Department of Natural Resources, local fire districts on hand to suppress fires. Emergency medical or air ambulance for personal injuries.

b. *Noise*

1) *What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?*

No noises in the area will affect the proposal.

2) *What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.*

During the road construction, maintenance, and harvest activities, there will be some noise associated with heavy equipment, chain saws, and log truck operations.

3) *Proposed measures to reduce or control noise impacts, if any:*

Noise levels are not expected to result in significant impact. Therefore, no mitigating measures are planned.

8. Land and Shoreline Use

a. *What is the current use of the site and adjacent properties? (Site includes the complete proposal, e.g. rock pits and access roads.)*

The site is currently used for timber production, cattle grazing, and dispersed recreational activities such as hunting, wood cutting, and hiking.

b. *Has the site been used for agriculture? If so, describe.*

Yes, cattle under an existing lease are currently utilizing the site.

c. *Describe any structures on the site.*

There are remnants of an old cabin near new road construction, just before entering the top of Unit 3.

d. *Will any structures be demolished? If so, what?*

No, structures will not be demolished as a result of this proposal.

e. *What is the current zoning classification of the site?*

No zoning applies.

f. *What is the current comprehensive plan designation of the site?*

Rural

g. *If applicable, what is the current shoreline master program designation of the site?*

There is no shoreline master program designation of this site.

h. *Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.*

No part of this site has been classified as "environmentally sensitive."

i. *Approximately how many people would reside or work in the completed project?*

No people are anticipated to work in or reside in the completed project area.

j. *Approximately how many people would the completed project displace?*

The completed project will not displace anyone.

k. *Proposed measures to avoid or reduce displacement impacts, if any:*

The completed project will not displace anyone, so no measures are proposed.

l. *Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:*

This proposal shall maintain and/or enhance compatibility with existing and projected land uses such as timber production, grazing, dispersed recreational activities and use by wildlife for forage, roosting, travel, and cover.

9. Housing

a. *Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.*

No housing will be needed

b. *Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.*

No housing will be eliminated

c. *Proposed measures to reduce or control housing impacts, if any:*

There will be no housing impacts as a result of this proposal.

10. Aesthetics

a. *What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?*

There will be no structures built as a result of this proposal.

b. *What views in the immediate vicinity would be altered or obstructed?*

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☒*No* ☐*Yes, viewing location:*

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☐*No* ☒*Yes, scenic corridor name:*

Portions of the proposal are visible from Highway 20 west of Republic, Washington.

3) How will this proposal affect any views described in 1) or 2) above?

The proposed harvest units that will be visible from Highway 20 will appear thinned as drivers pass by.

c. *Proposed measures to reduce or control aesthetic impacts, if any:*

Approximately 25 of the largest trees per acre and all advance regeneration will be left in visible areas of those units to reduce the visual impact from Highway 20 and to maintain the forested nature of the area. Furthermore, all road locations were designed in conjunction with harvest prescription to minimize their visual impact from Highway 20.

11. Light and Glare

a. *What type of light or glare will the proposal produce? What time of day would it mainly occur?*

Possibly glare from logging equipment during daytime hours.

b. *Could light or glare from the finished project be a safety hazard or interfere with views?*

The proposal will not produce any light or glare.

c. *What existing off-site sources of light or glare may affect your proposal?*

No off-site sources of light or glare will affect the proposal.

d. *Proposed measures to reduce or control light and glare impacts, if any:*

There are no measures to reduce or control light and glare impacts as a result of this proposal.

12. Recreation

a. *What designated and informal recreational opportunities are in the immediate vicinity?*

There are no designated recreational areas in the salea area. Informal activities such as hunting, hiking, and camping may occur within the immediate vicinity.

b. *Would the proposed project displace any existing recreational uses? If so, describe:*

During harvest operations, areas of the timber sale and haul routes will be unsafe for recreation use due to timber harvesting operations.

c. *Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:*

During harvesting operations, warning signs will be posted on the E373107A/B/C, and E373119A roads.

13. Historic and Cultural Preservation

a. *Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.*

No, there are no places or objects in, or proposed for national, state, or local preservation registers known to be on or next to the site.

b. *Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.*

There are no landmarks of importance on the site.

c. *Proposed measures to reduce or control impacts, if any:*
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

If an unknown historic or cultural resource is discovered during the operation, the following process will occur: 1) Cease operations affecting the discovered site. 2) Physically identify the site on the ground so it can be located and impacts mitigated (a buffer if necessary). 3) Contact region state lands assistant and district manager, and work in collaboration on timing, confidentiality, and notification of tribes and other affected parties.

14. Transportation

a. *Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.*

All access roads for this proposal are off of Highway 20 west of Republic, Washington.

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

There currently is no transportation problem to which this proposal would contribute. It is possible that this proposal could add noise, dust, or safety problems on Highway 20. Warning signs will be posted informing the public of timber harvesting and hauling activities.

b. *Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?*

The site is not currently served by public transit.

c. *How many parking spaces would the completed project have? How many would the project eliminate?*

The completed project would not have any parking spaces.

d. *Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).*

Yes, see A.11 and attached activity map.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

This proposal should have no significant impact on the current transportation system. Any impact will be temporary, and limited to the period of time during which operations are being conducted. No public use will be allowed on newly constructed/reopened roads during the sale activity.

e. *Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.*

No, the project will not use water, rail, or air transportation.

f. *How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.*

This proposal should result in no increase in vehicle trips per day upon completion of timber sale. However, log hauling may involve from approximately five to ten loads per day during the course of operations. Also, see B.14.d.1., above.

g. *Proposed measures to reduce or control transportation impacts, if any:*

Log hauling will not be permitted from April 1st to June 1st due to spring breakup.

15. Public Services

a. *Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.*

The project would not result in an increased need for public services.

b. *Proposed measures to reduce or control direct impacts on public services, if any.*

There are no measures planned to reduce or control impacts on public services, as there are no impacts expected as a result of this proposal.

16. Utilities

a. *Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.*

None

b. *Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.*

There are no utilities proposed for this project.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: _____Date: _____
Sam Grimm Highlands District Forester 1

Reviewed by: _____Date: _____
Loren Torgerson Highlands District Manager

Reviewed by: _____Date: _____
Bob McKellar Management Forester

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